

U.S. Patent Application No. 10/083,657
Amendment dated February 15, 2005
Reply to Office Action of November 15, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-14. (canceled)

15. (original) A method of milling material comprising milling said material with a milling media having a first size and then milling said material with a milling media having a size smaller than said first size, wherein said material comprises a getter material, a starting niobium oxide, an oxygen reduced niobium oxide, or combinations thereof.

16. (original) The method of claim 15, wherein said milling media and said second milling media are milling balls.

17. (original) The method of claim 15, wherein said material is no smaller than about 1/10 of said first ball diameter.

18. (original) The method of claim 17, wherein said first ball diameter is replaced by said second ball diameter when said material is from about 1/100 to about 1/1000 size of first said ball diameter.

19. (original) The method of claim 15, wherein said second ball diameter is less than about 10 times said size of said material.

20. (original) The method of claim 15, further comprising at least one additional milling step using milling media wherein the size of the milling media has an increasingly smaller size compared to the most previous milling step.

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21. (canceled)

22. (currently amended) The method of claim 21-18, wherein said second ball diameter is less than about 10 times said size of said material.

23. (withdrawn) A method to reduce the size of a material comprising milling said material in a mill wherein the surfaces of the mill that come in contact with said material comprise the same metal or alloy thereof, an oxide thereof, a nitride thereof, or said metal with at least one dopant, present in said material, wherein said material is getter material, a metal oxide, an oxygen reduced metal oxide, or combinations thereof

24. (original) The method of milling material comprising milling said material with a milling media having a first size and then milling said material with a milling media having a size smaller than said first size, wherein said material comprises a getter material, a starting metal oxide, an oxygen reduced metal oxide, or combinations thereof.

25. (withdrawn) The method of claim 1, wherein said getter material is first introduced into said mill and is milled for a predetermined time and then said starting niobium oxide is introduced into said mill and said getter material and said niobium oxide are milled together.

26. (withdrawn) The method of claim 25, wherein said starting niobium oxide is introduced into said mill after the particle size of said getter material is from about 1 to about 1 to about 10 microns.

27-29. (canceled)

30. (new) A method of milling material comprising milling in a mill said material with a milling media having a first size and then milling said material with a milling media having a size

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smaller than said first size, wherein said milling results in a particle size of 5 microns or less for the material wherein said material comprises niobium, niobium hydride, niobium pentoxide, an oxygen reduced niobium oxide, or combinations thereof.

31. (new) The method of claim 30, wherein the mill has surfaces and said surfaces of the mill that come in contact with said material comprise niobium or alloy thereof, an oxide thereof, a nitride thereof, or niobium with at least one dopant.

32. (new) The method of claim 30, wherein said milling media is one or more balls which are coated with niobium or are completely made of niobium.

33. (new) The method of claim 30, wherein said material is present with at least one binder, dispersant, solvent, surfactant, lubricant, or combinations thereof.

34. (new) A method of milling material comprising wet milling niobium or niobium hydride with a milling media having a first size and then milling said niobium or niobium hydride with a milling media having a size smaller than said first size to form a milled niobium or niobium hydride and then co-milling said milled niobium or niobium hydride or combinations thereof with niobium pentoxide wherein said niobium pentoxide and said niobium or said niobium hydride or combinations thereof have a particle size of 5 microns or less after said co-milling.

35. (new) The method of claim 34, wherein said material is present with at least one binder, dispersant, solvent, surfactant, lubricant, or combinations thereof.

36. (new) The method of claim 34, wherein said milling occurs in a mill having surfaces that come in contact with said material comprise niobium or alloy thereof, an oxide thereof, a nitride thereof, or niobium with at least one dopant.

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37. (new) The method of claim 34, wherein said niobium or niobium hydride prior to said co-milling is dry.